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SOCIAL PSYCHOLOGICAL FACTORS IN KNOWLEDGE UTILIZATION AS APPLIED TO EDUCATIONAL ADMINISTRATION.

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THREE PROBLEM AREAS ARE EXPLORED IN THIS SOCIAL PSYCHOLOGICAL ANALYSIS OF RESEARCH UTILIZATION IN EDUCATIONAL ADMINISTRATION--(1) INTERPERSONAL RELATIONSHIPS BETWEEN BEHAVIORAL SCIENTISTS AND SCHOOL ADMINISTRATORS, (2) PSYCHOLOGICAL LINKAGES BETWEEN THE ADMINISTRATOR'S SCIENTIFIC KNOWLEDGE AND HIS ACTIONS, AND (3) THE LACK OF CONNECTION BETWEEN THE ADMINISTRATOR'S ACTION REPERTOIRE AND THE REQUIREMENTS OF EACH NATURAL SITUATION AS IT ARISES. UNPRODUCTIVE RESEARCHER-ADMINISTRATOR RELATIONSHIPS ARE CHARACTERIZED BY POOR COMMUNICATION, NEGATIVE STEREOTYPES OF ONE ANOTHER HELD BY RESEARCHER AND ADMINISTRATOR, AND DISTRUST AND SUSPICION SUPPORTED BY THE INCONSISTENT NORMS OF EACH ONE'S REFERENCE GROUP. PSYCHOLOGICAL PROCESSES CONTRIBUTING TO THESE DIFFICULTIES IN INTERPERSONAL RELATIONS INCLUDE SELECTIVE PERCEPTION OF EACH OTHER'S BEHAVIOR, DISTORTIONS OF MEMORY, A TENDENCY TO PLACE LOW VALUE ON EACH OTHER'S WORK, AND THE POSSIBILITY OF COLLABORATION THREATENING THE SELF-CONCEPTS OF BOTH RESEARCHER AND ADMINISTRATOR. TEN CLUSTERS OF SOCIAL PSYCHOLOGICAL ASSUMPTIONS ARE LISTED FOR BUILDING CONNECTIONS BETWEEN THE PRODUCTION OF RESEARCH KNOWLEDGE AND THE IMPROVEMENT OF ADMINISTRATIVE PRACTICE IN EDUCATION. THIS PAPER WAS PREPARED FOR PRESENTATION AT THE UCEA CAREER DEVELOPMENT SEMINAR (17TH), CO-SPONSORED BY THE UNIVERSITY COUNCIL FOR EDUCATIONAL ADMINISTRATION AND THE UNIVERSITY OF OREGON (PORTLAND, OREGON, OCTOBER 22-25, 1967), AND WILL BE AVAILABLE FROM THE PUBLICATIONS DEPARTMENT, CENTER FOR THE ADVANCED STUDY OF EDUCATIONAL ADMINISTRATION, HENDRICKS HALL, UNIVERSITY OF OREGON, EUGENE, OREGON 97403. (JK)

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SOCIAL PSYCHOLOGICAL FACTORS IN KNOWLEDGE UTILIZATION AS APPLIED TO EDUCATIONAL ADMINISTRATION[1]

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> "Knowledge is not practice and practice is not knowledge. The improvement of one does not lead automatically to an improvement of the other. Each can work fruitfully for the advancement of the other, but also, unfortunately, each can develop separately from the other and hence stuntedly in relation to the other."
>
> Fritz T. Roethlisberger (1962)

This paper explores some dimensions of Roethlisberger's statement for transforming behavioral science knowledge into administrative practice in education. An abundant and rapidly increasing amount of useful research knowledge from behavioral sciences is available today for educational administrators and teachers. Behavioral scientists are producing relevant concepts, diagnostic devices, and practices in such critical problem areas for the educator as change (Watson, 1967a, Watson, 1967b, Miller, R., 1967, and Hollister and Bower, 1967); social problems (Coleman, J. and others, 1966, and Deutsch, Martin, 1960); classroom instruction

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[1]This paper deals with human as opposed to structural problems in knowledge utilization. It was presented at a conference on the topic of "Knowledge Production and Utilization in Educational Administration: Role Emergence and Reorganization." The conference was jointly sponsored by the University Council for Educational Administration and The University of Oregon (School of Education and Center for the Advanced Study of Educational Administration), and was held in Portland, Oregon on October 23-25, 1967.

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(Fox, Lippitt, and Schmuck, 1964; and Amidon and Hunter, 1966), and leadership (Gross and Herriott, 1965; Culbertson, 1963; Amidon and Blumberg, 1966). Although some clearly are benefiting from this knowledge explosion, little of the total amount of behavioral science knowledge seems to influence the practices of a large number of school administrators. Responsibility for this state of affairs should not be lodged with the administrators alone nor with the behavioral scientists alone. The lack of knowledge utilization is truly social psychological in the sense that it involves both parties simultaneously interlocked in a complex set of ineffective communications.

One reason frequently given by the administrator for not using research knowledge more completely is that typically it is not directly related to the daily tasks of running the schools. Although this has been largely true, there now are many pieces of research such as referenced above that are directly relevant and potentially very helpful. Moreover, many other contemporary studies, if not directly relevant, have definite implications for school administrators, e.g., on change see Gardner (1963); in area of social problems, see Clark, K. (1965); for classroom instruction see Bradford, Benne, and Gibb (1964); and on leadership see Likert, R. (1961) and Dubin (1961). Assuming that much of what is being produced today in research is either directly or indirectly related to administration, let us explore some of the social psychological factors which inhibit communication between behavioral scientists and educators. This paper will discuss some of the possible interpersonal and psychodynamic reasons for low levels of utilization of scientific knowledge in educational administration and suggest some implications for amelioration. I will begin by presenting some illus-

trative reactions of administrators to attempts by behavioral scientists for research utilization in public education.

During the past eight years, I have been engaged in activities aimed at bridging the gap between the science of social psychology and the practice of classroom teaching. These activities have brought me into direct contact with many superintendents, school principals, curriculum consultants, school counselors, and classroom teachers. I have received various reactions to action research projects most of which have been positive and supportive. However, there have been some skeptical, hesitating, and extremely negative reactions to action research, and I wish to recall some of those in the context of discussing some traditional attempts at knowledge utilization in education.

Perhaps the most traditional and least successful mechanism for research utilization in education is the professional research journal. It is likely that most educators do not read the behavioral science journals. Indeed, behavioral research articles usually are not written in understandable ways from the point of view of the administrator. Information coded in a form understandable to the scientist often is only useful among other researchers using a similar language code. Even at professional meetings where the researcher is able to view audience reactions, serious problems of miscommunication and misunderstanding arise because of the discontinuities between the language system of the scientist and the educator. When administrators are asked to read behavioral science articles, some typical reactions are, "There is too much interest in theory. I want ideas on how to handle specific problems." "I don't have enough time to read." "There is too much attention to proof and statistics." "Even after you wade through

the article, you find that the researchers did not prove anything." From the perspective of the educators, these reactions are quite real and deeply felt. Some behavioral scientists have been similarly concerned and have been effective in advocating journals that are more directly relevant to the practitioner. Among the most notable examples are Transaction, Psychology Today, Journal of Applied Behavioral Science, and Theory Into Practice. Even here, however, I strongly suspect that behavioral scientists are the primary consumers of these journals. The scientist, himself, finds refreshment in research reporting that is not so formal and which does not overwhelm with statistical analyses. Perhaps the scientist has actually satisfied more of his own desires than those of the educators in the production of these ostensibly "practitioner and lay oriented" magazines.

Since virtually everyone seems to know that educators do not read the scientific journals, one popular alternative for attempting research utilization in the schools is to bring in an outside expert consultant. The consultant presumably will bring to the school system many of the concepts and implications that could be gleaned from research journals if they were more readable and understandable. Moreover, the consultant hopefully will have integrated the materials, thus relieving the educators of that very difficult and time consuming exercise. The consultative work of the outside expert often results in giving the administrator an aura of using recent scientific knowledge but usually very little change or follow-up occurs after the consultant leaves. When the consultant is used extensively the relationship between the expert and the practitioner sometimes results in stances of dominance and dependency. Within the framework of such a relationship the consultant's information is reacted

to either with total, but superficial, acceptance or with covert rejection, more often the latter. A frequent response is superficial compliance (Kelman, 1958) on the part of lower eschelon administrators especially when the superintendent, out of a desire to appear modern, has encouraged the consultation or even initiated it. The most frequent covert reaction involved in this cursory compliance seems to be something like this: "We are to do this because the boss wants it. This consultant hasn't been in this school before. How can he know what's going on here?" "This guy doesn't know what he is talking about. It's OK in theory, but that won't work here, etc."

In an attempt to overcome these resistances, applied behavioral scientists and experimentally minded educators have encouraged utilizing scientific knowledge by diffusing the successful program or experiment from one system to another. Often the outside consultant is involved also, but in this case, he brings to the school system a program that has had clearly positive effects in another place. Being asked to try a project which was successful elsewhere often stimulates a similar reaction of superficial compliance among administrators and teachers. But other, perhaps more familiar reactions also are involved. The administrator or teacher might say, "That system is different from ours. It doesn't really have the same kinds of problems." "That is a nice idea for that teacher in that school system, but it won't work with most of our teachers."

Researchers and educators schooled in group dynamics theory and practice feel that practices brought in from the outside without considerable involvement among those who are to use them usually are not successfully continued. Local initiative and participation is needed so that the new practice is not dismissed because it is a foreign importation. Thus,

developing research knowledge from within the school system has been frequently recommended as a way of encouraging the use of scientific knowledge (Watson, 1967a). Here the knowledge used concerns scientific methods and processes more than any one particular theory or set of research findings.

Two principal patterns are employed; the primary one involves a small scale research trial project which precedes anymore widespread use in the system. Unfortunately, negative reactions toward those who first try the practice occur even when it is tested within a school system. Moreover, the educators who are not directly involved in the trial ask, "Who's getting a dissertation out of this?", implying that the experiment is being done for personal gain rather than for the enhancement of the educational goals. Another common feeling is that the research will not reveal much anyway and the question often arises, "What good will this project do us?" "We've done research projects before, but they usually don't lead to anything."

Another approach, called survey data feedback, involves the collection of data from participants within the school system which are fed back subsequently (Mann, 1957). Data, for instance, might be collected on creative practices that teachers are using in their classrooms. Such classroom practices might be screened by behavioral scientists and systematically fed back to other teachers (Kaufman, Schmuck and Lippitt, 1963). Another cluster of data might concern the achievement levels or school related attitudes of the students and be fed back in order to induce problem-solving activity in the teachers (Schmuck, Chesler, and Lippitt, 1966). Similar data can be collected from teachers on how they see staff relationships in the school or between the teachers and the principal (Watson, 1967b).

Although methods such as these encourage positive problem-solving behaviors, they may also be discouraged by quite a few administrators. Some stated resistances are: "These data are interesting, but they don't tell us what we should do about it." "Now I see the data, how do we compare with other systems?" "Does the data mean we're good or bad?" "We don't have anymore time to work on this; it was interesting!" These and other reactions limit the usefulness of data collected from within the school system.

Three Problems in Connecting Knowledge and Practice in Educational Administration

The administrators' reactions to attempts at knowledge utilization described above are disturbing. We would hope that school administrators would scan and explore the results of behavioral science research in attempts to improve their abilities and skills. Many behavioral scientists and educational administrators are frustrated over the small amount of behavioral science knowledge that is used in administering schools. Let us explore three points in a social psychological analysis of the utilization process where problems occur. These points all represent gaps in the connection between research knowledge and administrative practice.

The first problem point involves the interpersonal relationships between behavioral scientists and school administrators. There is a definite lack of effective communication existing between them, even between applied behavioral scientists with social engineering interests and well-read school administrators who view innovation positively. From a recent search of the literature in the social psychology of leadership and small group processes (Schmuck, in press) along with my work as a human relations trainer, three primary areas stand out in which too little communication exists between researcher and practitioner.

The first and most outstanding example concerns research findings on effective leadership in small groups and in large-scale organizations. Research on small groups by Bales (1958), Cartwright (1959), Fiedler, (1958), Flanders (1960), Maier and Solem (1952), and associates of the National Training Laboratories (Lippitt, Gordon, 1961) have considerable relevant information for school administrators. In a parallel fashion, the recent organizational research by Argyris (1964, 1965), Herzberg and

others (1959), Katz and Kahn (1966), and Likert (1961) is directly relevant to school administrators' needs to run an effective organization. While some industrial leaders immediately attempt to use such findings, educators seem to proceed responding more to situational pressures and traditional expectations than to the latest research. Few school administrators appear to be aware that such relevant research exists.

Even more directly relevant research findings have been generated by Gross and Herriott (1965). They collected extensive data on a syndrome of principals' behaviors, titled Executive Professional Leadership, which was shown to be correlated to such positive outcomes in the school as teacher satisfaction, teacher innovativeness, and increased student learning. The research was quite specific in indicating those behaviors which made up the syndrome of Executive Professional Leadership, and was strengthened by having been based on a national sample of schools chosen through scientific sampling procedures. Ideally, this research would be read by most elementary school principals in the nation, yet this excellent work is better known, and I think more highly respected, by sociologists than school administrators.

Finally, a very helpful group of research reports in behavioral science concerns the various uses of scientific observation systems, questionnaires and interviews (Kahn and Cannell, 1957). Considerable amounts of work have gone into the production of research methods to collect more accurate social psychological data. Such instruments are seldom used by school administrators to collect data on their own school or school system. Indeed, my experiences have indicated that teachers are more likely to use diagnostic tools in their classrooms than most administrators are in the school (Fox, Luszki, and Schmuck, 1966). School administrators

seem to go about collecting data on their school system using a layman's naive theory of communication and information. They do not seem to be aware of sampling or of asking questions in ways that will minimize the bias in responses. Such data collection procedures could be very helpful in a school system doing its own problem-solving for creating a more effective organization. These examples of scientific knowledge not now being used by many educational administrators are taken from my own experience and therefore center on social psychological content. But I believe this lack of connection between knowledge and practice is just as significant in other social sciences, e.g., the administrator could use more understanding of the political dynamics in his community and the way political pressures are exerted and affect his work; or we might expect him to understand better the role played by the economics of his community in educational decision-making.

A second problem point in connecting research knowledge to practice concerns the psychological linkages between the administrators' scientific knowledge and his actions. In this case, the administrator may know about the research, in fact can speak and write about it, but it does not affect the way he behaves in his administrative role. One indication of this may be reflected in Gross and Herriott's (1965) finding that there is no relationship between the number of course hours an administrator has taken in graduate school and his leadership effectiveness as preceived by the teachers. If we assume that relevant concepts and research findings are presented, at least in some of the courses taken, it appears that this knowledge does not ameliorate the administrator's leadership skills.

Another example comes from a study in which I participated last year in the Philadelphia city schools (Schmuck and Edelman, 1967). We engaged

psychiatrists, clinical psychologists, and social workers to consult with teachers on classroom mental health for a twelve-week period. We measured changes in the teachers' perceptions of the cognitive meanings of student and classroom group mental health, their teaching practices and the students' reactions to the teacher. We found significant changes in some of the teachers' cognitions, especially in cases where the consultants had had public school experience, but failed to find many cases of changes in the teachers' classroom behaviors or in the students' reactions to the teacher during the school year. Cognitive alterations had occurred, or at least the ability to talk about classroom mental health had changed; but few behavioral changes occurred in the teachers' practices and the students noted very few changes in their class.

The third problem point concerns a lack of connection between the practitioner's action repertoire and the requirements of each natural situation as it arises. It occurs where there is inappropriate transfer of training or when the administrator has few skills in diagnosing situations and receiving feedback. A major challenge involved in social practice is altering one's practice with changes and new demands in the situation. Examples are educators who think that a certain teaching practice will be equally as effective with all children and all classroom groups. Similarly, school principals sometimes make the mistake of assuming that one pattern of running staff meetings will work equally well from year to year with different staffs.

Two deterrents to such flexible responsiveness are a stereotypic view of behavioral science concepts and findings as well as a lack of skill in obtaining feedback from others. The stereotype involves a conception that behavioral science principles, especially on such topics as leader-

ship and communication, are true regardless of the participants in the interaction and the nature of the situation. When the finding seems not to hold in a given situation, it sometimes is viewed as totally incorrect and is thrown out by the practitioner. Handling new situations flexibly involves considerable skill in obtaining feedback from other participants and seldom is part of the repertoire of either the educational administrator or the behavioral scientist.

Social Psychological Factors Related To These Problems

The likelihood of forming a close communicative relationship between behavioral scientists and educational administrators is conditioned by a number of factors. Physical proximity of the school to a university, the amount of funds available in the school for new materials and to hire expert consultants, the superintendent's desires for educational achievement and recognition, and the "cosmopolitan" character of the school staff indicated by attendance at professional meetings and conventions all may play a part in encouraging communication between researcher and practitioner. However, interactions in which researcher and administrator actually influence each other in a face-to-face setting are very much underused, in contrast to one-way, more impersonal interactions. Such gulfs in communication encourage the emergence of in-group, out-group feelings similar to group prejudices, discussed by Allport (1954), which are accompanied by mutual stereotypes, low levels of trust and high amounts of suspicion. School administrators are viewed by the researchers as being unsophisticated, anti-intellectual, and dependent, while researchers are viewed by educators as wanting to base everything done in the school on research and as having their "heads in the clouds." Administrators are seen as "flying by the seat of their pants," as not interested in achieving educational goals, and as primarily concerned with organizational maintenance and smooth functioning. Researchers are viewed as "not in the real world," as "feathering their own nests" and not as contributing to educational improvement. They are cynically called "superior" individuals but actually are viewed as inferior because they are unable to be practical and down to earth.

Stereotypes and antipathies are intensified by a lack of two-way

communication. As communication between researchers and administrators decreases, the initial stereotypes and antipathies of each are less likely to be modified than if interpersonal give and take is continued. Indeed a lack of communication often increases negative feelings even more as Newcomb (1947) discussed with the concept of autistic hostility. The negative stereotypes that each hold of the other become more negative and well established because they are controlled by private fantasies (autisms) rather than realistic perceptions and experiences. The lack of communication, the lack of giving and receiving feedback, as well as the sheer physical distances between the university and the public school help maintain the prejudices.

Not only is attraction low between researchers and administrators because of this inter-group conflict, but also because to some extent each challenges and threatens the other's intelligence and professional role status (Pepitone, 1964). The researcher fears that his research may not be relevant or significant; moreover, perhaps he really does not understand very much about the processes of the school. The administrator fears that the researcher will uncover weaknesses in his school that would establish how poorly he administers the building compared with other principals. Or the administrator may be concerned that his lack of knowledge about the rudimentary aspects of behavioral science will be made public. It is psychologically safer for each to remain separate and distinct from the other.

This state of affairs can be illustrated by several personal observations of interpersonal circular processes involving researchers and administrators. In one such relationship, a school principal with a self-concept involving feelings of inadequacy in behavioral science perceived

that he was viewed as incompetent and unsophisticated by the researcher. The administrator's initial feelings about the researcher, when he was able to communicate with him, were trusting, optimistic, and dependent. Moreover, he perceived the researcher as being very competent and skillful. These feelings and perceptions resulted in the administrator's acting friendly, respectful, and seeking the support and direction of the researcher. Moreover, he had an almost compulsive readiness to accept any signs of friendliness and support from the researcher.

The researcher, on the other hand, possessed a self-conception of personal adequacy along with a negative attitude toward others' depending upon him and a dislike for persons who were overly demanding and deferential. The researcher reacted with hostile and rejecting feelings toward the dependent administrator. Out of these feelings, a distrusting and commanding orientation emerged which resulted in impersonal avoidance. In turn, the researcher's behaviors were perceived as unfriendly and non-supportive by the administrator whose initial trust was betrayed and whose failure to achieve a rewarding relationship led to covert hostility and withdrawal from the researcher.

Another instance of a negative circular process involving a researcher and an administrator was one in which the administrator had a positive evaluation of his own abilities and skills, particularly the ability to administer his school effectively. He also perceived himself as being negatively judged by the researcher and he felt disrespect and dislike for him. His mind-set involved distrust and a desire to make the researcher appear inadequate and foolish, which often resulted in hostile responses toward and active resistance of the researcher's attempted influence.

The researcher perceived the administrator's behaviors as unfriendly

restricting and demanding and was oriented toward resistance and punishment. He had a self-concept of relative adequacy in relation to the administrator, perceived the administrator as not liking him, and responded with negative feelings himself toward the administrator. The researcher sometimes commenced competitive influence attempts toward the administrator especially in front of the school staff which the administrator saw as confirming his own distrust, thus accentuating his desire to put the researcher on the spot with the teachers.

One ingredient lacking in many researcher- administrator relationships is trust. Mutual trust and confidence is most likely to occur when people are positively oriented to each other's welfare (Deutsch, 1958). Although some mutual concerns undoubtedly are present, the university-based researcher and the school administrator have very little day-to-day concern for each other. Furthermore, trust has little opportunity to develop because there are so few cooperative relationships and very little communication between them.

Deutsch (1960) studied trust and suspicion within three normative frameworks. He showed that trust is enhanced by a norm of cooperation, while suspicion is engendered when competition imbues the relationship. A third social arrangement in which the parties are individualistically oriented leads to trust about half of the time. My impression is that relationship between researchers and practitioners is mainly one of separatism and fits Deutsch's individualistic category. Further study by Deutsch revealed that trust can be established in parties with individualistic orientations through active face-to-face communication, provided the communication has the basic normative features of cooperation. The illustrations of negative circular processes described above obviously lacked

these basic features of cooperation. Communication takes on cooperative features when the parties share their intentions toward each other and express their expectations to each other about the relationship. Much of the trouble involved in the circular processes described above came about because intentions and expectations were hidden and allowed to grow into still more negative autisms. Distrust is engendered further by each party believing the other has more to gain through exploitation than through collaboration. This appears to be especially true of the administrator's perceptions and feelings concerning the researcher, for he often feels that the time and energy his staff spends on a project is not adequately rewarded by improvements in the school. Often, in fact, the school organization is disrupted and some teachers are displeased with the administrator for "getting them into the project." The administrator often views researchers as benefiting through a dissertation or publication which will have little, if any, use for the school. Conversely, distrust for the educators' complete commitment to a project often is felt by the researcher. The researcher sometimes feels that educators exploit him because they are mostly interested in credit toward an advanced degree with seemingly little interest in the research evaluation which requires control groups, careful historical records, and a great deal of effort in filling out before and after questionnaires. Another reason for distrust is each perceiving that he is unable to exert much control over what the other does in the relationship. The educator is anxious over the kinds of information that the researcher may discover, while the researcher is apprehensive that the educators will bias their responses in order to appear more respectable and socially acceptable.

The distrust and suspicion experienced by both researchers and

administrators are supported by their respective reference groups. Many researchers react to the expectations and demands of a cosmopolitan, professional group which stresses the manipulation of ideas and abstractions for their own sake. Moreover, the researcher's associates hold the value that one should search for the best, most rational, most economical and most elegant solution when problem-solving. The "scientific community" stresses the pursuit of truth and rewards clear explanations, depth analyses, and advances in understanding. The researcher's primary gratification comes from receiving favorable evaluations for written products from the experts and perceived authorities in his field.

The major reference groups of the educational administrator tend to reside in the more immediate environment, and to be more directly tied to the daily operations of the school. The administrator reacts more to the expectations and demands of those in the neighborhood, larger community and school system. These persons emphasize more concrete thinking, expressing opinion carefully, and the control or manipulation of feelings. The administrator's contacts stress the value that in solving a problem, one searches for the possible course and hopes that the solution chosen is durable. At all times, however, the administrator must be ready to back off and to see another alternative approach to the problem. He is usually expected to take action on inadequate, unreliable, and often conflicting information. Unlike the researcher, his personal commitment involves neither the "truth" nor explanation and understanding; rather he responds more to the opinions of others, to the immediate demands placed upon him, and to problem situations more immediately. The administrator attempts to overcome barriers, to communicate more effectively, to gain interpersonal influence, and to establish group consensus. His most

significant gratifications come from the development and maintenance of effective and satisfying relationships in the school. His ability to run things smoothly is most often highly rewarded by his reference groups.

These two sets of group norms and pressures are inconsistent and serve as social support for a lack of effective communication between researcher and administrator. Researchers view administrators as diplomatic, unscholarly, and lacking a long-range perspective. All of these perceptions are partially correct because of the role expectations of and social pressures on the administrator, especially from the vantage point of the researcher. On the other side, behavioral scientists are viewed as impractical, unaware of reality, and lacking the ability to handle daily problems effectively, and as avoiding the difficult interpersonal relationships that are inevitable in running any organization. Again, these perceptions also are partly accurate, especially when the respective reference group pressures discussed above serve as the frameworks of each party.

Let us turn now to a discussion of four psychological processes which accompany these interpersonal dynamics and appear to play significant roles in keeping behavioral scientists and administrators from communicating effectively. First, each party, the researcher and the administrator, selectively perceive aspects of the others' behaviors. The researcher often does not perceive the turmoil of the administrator in handling daily problems. His long-range perspective and a predilection for cautious objective analyses do not support empathy for the administrator's need to please many people promptly. The administrator often does not perceive the high value that the researcher places on objectivity and unbiased analysis, and fails to see how his inconsistencies and lack of respect for

careful analysis disturb the researcher.

Along with selective perception, there are distortions in memory which limit the relationship's effectiveness. The three psychological processes discussed by Allport and Postman (1945) referred to as leveling, sharpening, and assimilation have relevance here. Leveling involves reducing the content remembered about an event by forgetting most of the details, making the event more concise, and remembering only major points. Sharpening refers to the converse process wherein the person remembers specific points that were highlighted for him or that stood out because of their uniqueness or strangeness. Sharpening involves selective perception and retention. Assimilation, the most complex process, refers to the person remembering things in terms of his personal values, motives, expectations and previous information. New messages are understood within a personal framework that already exists. These three processes have been observed to occur in so-called derivation conferences with school administrators. The goal of a derivation conference is to stimulate participants to derive implications for their work from established research findings in behavioral science. It is extremely difficult to discipline the educator or any practitioner for that matter to derive implications from one finding at a time. Moreover, the practice suggested by the administrator often is not supported by the research finding but is tangentially related to it. Sometimes, one finds that the educator's frame of reference is so limited that he is unable to see any connections between research and practice that are different from those he has been carrying around in his mind before the conference.

Perhaps the most significant psychological gulf to knowledge utilization in education concerns the low value many administrators place on the

products of behavioral science. Although the administrator usually values new ideas, he often does not view researchers as contributing very many useful practices. Going to special conferences, especially those that are one-day and two-day conferences, is viewed as a way to get out of the school environment for a while. It is a rest period, a "vacation," and might be thought of as a "day-off." Seldom is the conference perceived as involving even more work, energy, and concentration than the daily tasks of the school or as contributing useful ideas to the daily operation of the school. Furthermore, the designs of such conferences usually do not encourage value confrontation, introspection and significant personal learning. The educator is to listen passively allowing selective perception and distortions in memory to help in maintaining and reinforcing his original conceptions of effective school administration.

Finally, psychological resistance to getting involved in close contact with a researcher involves the self-concept of the administrator. Getting involved with a person who challenges the way things are going is threatening to viewing the self as effective. Moreover, the perception of oneself as a prime mover and organizer, which satisfies the administrator's desires for control, may be undermined by the researcher's challenging his effectiveness. Collaboration may mean a loss of interpersonal influence and respect which could represent significant losses to the administrator who feels he must have these as bases for day to day action with his staff.

Even with all of these interpersonal and psychological processes working as barriers to effective administrator-researcher communication, many significant interchanges do occur and some educators do benefit greatly in the new knowledge they obtain. When effective communication does occur,

a new set of problems may arise that are concerned with building connections between the administrator's new knowledge and his role performance. The administrator who often possesses no effective skill in putting new knowledge to use may understand what steps are necessary to achieve a goal, at least cognitively, but still not be able to carry them out in his role behavior.

Skillful administrative action requires more than correct intent and practical research knowledge. Educational administrators who can indicate an effective technique to follow while discussing or writing about a situation in the abstract may easily become confused in the natural situation and actually have their behavior backfire in its intended effects. Most social skills in any type of administration require considerable practice before they are spontaneously available for use in real role situations.

As an example, it is not uncommon in schools to find the principal and first year teachers segregating themselves from one another despite strong interests in interacting, and their knowledge, in the abstract, of what might be done to bring about communication. However, the principal is concerned that if he initiates communication, it will be viewed by the teacher as snooping into her classroom practices and perhaps as prematurely evaluating her competence as a teacher. The new teacher fears that her initiated communications to the principal might be viewed as signs of dependency and requests for help which, in turn, might be viewed as personal weaknesses by the principal. The principal usually wants to offer help and the first-year teacher often wants to confer and receive help, but both lack the "ice-breaking" skills necessary. Their actual behaviors clearly are inconsistent with their interests and the principles of communication they undoubtedly learned at a cognitive level in college courses.

Inconsistencies between knowledge and action among administrators are supported by some interpersonal dynamics in the school. In all groups, role expectations develop and become stable over time. In the school, teachers form stable expectations for the principal's behaviors and the principal conceives of ways in which he expects his teachers to behave in their roles. New knowledge which implies innovative actions forces some alterations in these social expectations. If the knowledge implies that the principal should modify his behaviors in relation to the staff, the principal must also change the strong role expectations of others. In many schools, this represents a formidable task because role expectations for the principal are maintained by teachers, students, parents, other administrators, as well as the school board. The principal feels restrained and frustrated by these expectations and often continues to behave as he did before, even with the new knowledge in mind.

The administrator very often is strongly supported for not transforming new knowledge into revised practice by his fellow administrators. Through the joking comradeship of peers, the administrator is reinforced in his belief that scientific knowledge applies to ideal conditions and that such circumstances seldom are present in schools, especially his school. He thinks to himself that "it would be nice to try that" but it would "disrupt so many of the relationships in the school so as to make the new idea impractical." Peers unconsciously collude to keep the status quo by supporting a response of futility for the introduction of new approaches. By so doing, each feels relieving of the responsibility for putting new knowledge to use.

Another factor that supports the administrator in not converting knowledge into practice is the social structural division between the "role of administrator" and the "role of student" in our society. Most

behavioral science knowledge which the administrator is asked to use is communicated in special learning settings in which there is an instructor or consultant on the one hand, and students or learners on the other. The administrator plays the role of a student-learner in such settings and is asked to remember and use what is being communicated. Because of his previous experiences as a student, the administrator understands that the major expectations for him as a student have to do with his being able to discuss or write up the topic in an intelligent manner. Seldom has he been asked to behave differently as a result of classroom learning. This "parrot-like", intellectual attitude, well documented by observers of colleges and universities, discourages making the knowledge to practice connection. Moreover, such an attitude is supported strongly by peer group norms, since they too experienced the same set of expectations as they moved through college and graduate school.

Along with these social factors are some psychological processes that make it difficult to build a linkage between behavioral science knowledge and revised practice. The first of these has to do with unclear goals on the part of the administrator. Partly because of the many day-to-day pressures on him, the school administrator often manifests a maintenance orientation toward the school; the major task he works on seems to be keeping the organization running. The administrator's educational goals often are thought of in very general ways or not thought about at all. Discrepancies between the administrator's goals and his perceptions of actual states can create tensions that serve as motivating forces for improvement. When goals are unclear, it is difficult to know when one is falling short of his objectives. Moreover, even when the administrator does have clear goals, discrepancies cannot occur if he lacks skill in measuring the

actual state of affairs. Little motivational tension is felt when either the ideal or the actual condition is unclear.

Other psychological processes which deter knowledge utilization have to do with the motivational bases of administrative behavior. Atkinson's model (1966), useful for describing these processes, proposed that the tendency to act is determined by a motive force, an expectancy factor, and an incentive value of acting, all put together in a multiplicative relationship. Applying this theory, we might state that the tendency to try out different behaviors in the school would be a function of a motive to achieve multiplied by an expectation of putting across the new behavior successfully multiplied by incentive or reward for accomplishment.

The motive force to achieve is viewed by Atkinson as a drive which arises from a relatively stable aspect of personality. Atkinson (1958) has discussed achievement, power, and affiliation as three significant motives involved in human action. McClelland (1961) has shown that the achievement motive is correlated with risk-taking behaviors and the tendency to innovate. It may be that many educators are more concerned with affiliation, i.e., maintaining warm and congenial relationships or with power, i.e., maintaining hierarchical interpersonal relationships than they are with achieving excellence and competing with some standard of excellent performance. Even when the administrator possesses a high achievement motive, however, his expectancy for success or perceived incentive for accomplishing the new action may be low. With so many persons in the school system expecting him to maintain more traditional actions, he may feel that attempts at new behaviors will not meet with much success. Only in situations in which all members of the school face a common crisis, such as in major budget cuts or demands of community pressure groups, would it be acceptable for the administrator to change his behavior greatly

(Hamblin, 1958). Incentive value for change in behavior often is reduced when one is unable to get fairly immediate feedback on how well his behavior affected the situation. When criteria for success are unclear, when goals are unclear, or when one has difficulty in measuring the actual state of affairs, it is difficult to know how well or badly one has done. The educational administrator often finds himself in this situation.

Perhaps the most basic reason for a lack of connection between research knowledge and administrative practice has to do with the manner in which the knowledge was originally learned. We have already discussed how norms and expectations influence a separation between the role of learner and the role of administrator. The method of training involved in translating knowledge into practice also is an important factor. Verbal learning is not the same as skill learning. The exposition of research knowledge and implications for practice can be expected to help the administrator to talk about using the findings in his work, but only behavioral experience can train the administrator to practice in a different way. Furthermore, such practice should occur at several different times, separated by periods of rest to allow the administrator to internalize the new behaviors. Learning curves often exhibit plateaus or periods of relative standstill, before improvement resumes (Berelson and Steiner, 1964). Periods of behavioral practice should be separated by intervals of rest; and plateaus in learning might better be viewed as indicators of fatigue than as resistance and defensiveness. Generally speaking, behavioral practice should involve situations directly related to the administrator's job and should occur in a relaxed, anxiety-free, non-evaluative environment. Often practice in fantasizing behavioral responses before actually trying them out also facilitates more complete behavioral learning. It is likely,

furthermore, that the administrator will bridge the gap between knowledge and practice more effectively if the behavioral practice concerns behaviors that are very important to him and if the try-outs take place in pleasant and congenial circumstances.

The third problem point in connecting research knowledge to administrative practice is perhaps the most difficult to solve. If one assumes that the administrator has entered into effective communication with the researcher and has internalized the knowledge so as to have modified his role behavior, the issue of relating role behaviors appropriately to different situations is still present. Put another way, the effective utilization of research knowledge often breaks down when new behaviors are used indiscriminately in diverse situations. For instance, the administrator who has learned that he should be more non-directive in leading a discussion may treat all meetings in the new way without regard for the goals of the meeting or the personalities involved. Another administrator who has learned to explore the feelings of persons publicly may do this even when such communication may be superfluous to accomplishing work goals, as in group situations in which the tasks are well understood and favored by the participants (Shaw and Blum, 1966).

Mis-use or over-use of research knowledge can be just as much of a problem as not using the knowledge at all. One way of attempting to overcome such deficiencies concerns training in becoming sensitive to others' reactions and in more skillfully collecting and using feedback from them. Even though simulation is very helpful in bridging the internal psychological gap between knowledge and practice, no artificial practice is a completely adequate substitute for direct experience in learning to make role behaviors appropriate to different situations, provided the administrator

knows how to learn from his experiences by obtaining feedback (Daw and Gage, in press). Actual experience in the natural setting of the school offers the administrator an opportunity to build his own strategies of searching for cues that signal new behaviors on his part, to test hypotheses he has about how better to respond to these problems, and to change his behaviors in view of the feedback he receives.

Ambiguities in goals as well as the role expectations of others again serve to inhibit the appropriate uses of new behaviors. When goals are unclear, it is difficult to know when a given set of behaviors are successful. Without feedback, little learning can take place on the appropriateness of certain behaviors for selected situations. Also, new behaviors may be difficult to use because of the staff's stable role expectations. Once new behaviors are operational and the staff has made the necessary modifications in their expectations, it is even more difficult to make additional changes. Ways to overcome social deterrents such as these are to establish a norm which supports the experimental trial (Argyris, 1965) and to develop a procedure for the school staff evaluating itself (Jenkins, 1948). In such a school climate, the administrator could be free to try many different approaches and to get feedback on all of them from his staff.

Some other psychological processes also play a role in keeping the administrator from using new knowledge appropriately; the strongest of these involves the tendency for human beings to strive for psychological consistency. It may be difficult or at least uncomfortable to hold two apparently opposite conceptions in one's mind at the same time. Thus, it is peculiar to imagine that direct or indirect leadership approaches are both equally valuable. The strangeness is reduced when one understands that each is more appropriate in different group situations and with

different types of people. Or as Dubin (1965) has shown, leadership behavior positively affects the productivity of workers if it is appropriate to the technological setting. The more production resembles a unit or batch technology, the greater is the probability that worker autonomy and indirect leadership will be effective. Close and direct supervision is more appropriate when technology resembles a continuous production system. The school might be analogous to a unit technology, each classroom or every child might be considered as a product of the school. On the other hand, when one considers the class or student as progressing through the school from one teacher to another, the image conjured up is as a continuous production system. In order to utilize ideas such as those of Dubin effectively, the administrator must have the ability to hold many different concepts and behaviors within his personal repertoire at any one time. This requires a degree of flexibility and openness difficult for many persons.

Some Attempts at Building Connections to Transform Knowledge Into Practice

The foregoing section of this paper has analyzed some social psychological issues and problems in the knowledge utilization process in educational administration. Now I wish to go beyond analysis to suggest a few action implications. Let me begin by listing ten clusters of social psychological assumptions important for building connections between the production of research knowledge and the improvement of administrative practice in education.

(1) In order for the educational administrator and the behavioral science researcher to communicate effectively, there must be trust, openness, and some attraction between them. Trust can be increased through

collaborative participation in cooperative enterprises. Cooperation, in contrast to competition, must be established between them. A norm of cooperation is facilitated when both parties share their most significant intentions for entering into cooperation and their expectations of each other's behavior in the relationship. Moreover, cooperation can be maintained best when each party is able to tell the other that their expectations are being violated. Such open feedback will help keep the norm of cooperation viable.

(2) Cooperative activity entered into by the educator and the researcher should be structured so that each will directly benefit from it. The administrator should be able to see how the project will help him in accomplishing some of his school's goals more effectively without spending very much additional time or money. The researcher should be clear on the kinds of theoretical or practical contributions he will make by entering into the relationship.

(3) A period of time should be set aside at the beginning of any collaborative project for a discussion of the forces keeping both the administrator and researcher from entering the project. Public discussion of restraining forces and how they might be overcome is an important part of "unfreezing" both parties for collaboration. Furthermore, covert resistances and anxieties may be raised and discussed, thus strengthening the interpersonal bonds between researcher and administrator.

(4) The researcher and administrator should discuss and agree upon the superordinate goals that they share for the collaborative project. Even though both live in different sub-cultures which tend to encourage stereotypes and isolation, it is likely that both also share certain broad goals or values, e.g., higher achievement levels for students, more

satisfaction in teaching for teachers, and more effective teaching in terms of student mental health and motivation to learn.

These first four assumptions concern the lack of connection between researcher and administrator. Let us turn now to the problem of building internal psychological linkages between knowledge gained and useful actions tried by the educational administrator.

(5) The administrator's values and goals should be sharpened and more clearly defined during the knowledge utilization process. Whenever possible, objective instruments should be used and the administrator should be able to compare his goals with those of others. Also, the administrator should be stimulated to operationalize his goal statements so he will be able to get some measurement of how close or far he is from accomplishing them (Mager, 1962).

(6) Research knowledge, once received, should be transformed into practice through simulation activities (behavioral try-outs). First, he might attempt to think through his behaviors by fantasizing them. Then as a part of simulation practice, the administrator might attempt to identify those restraining forces within himself that keep him from using the new practices. Also he should learn how to receive feedback from the try-out and to act on the feedback by attempting the new practice several times.

(7) Although simulation is extremely important, so is trying out the practice in the real setting. The administrator might be supported during this difficult period by a seminar group meeting regularly to help each person over learning plateaus and to support revisions of the original practice whenever appropriate.

(8) For many innovations, especially those in leadership and interpersonal relations skills, it will be necessary for the entire staff, or a

significant part of it, to be involved in learning how to handle the change. Thus, role changes in administrators often should be accompanied by alterations in the expectations of the staff members.

Finally, let us turn to the problem of building connections between the behavioral repertoire of the administrator and the variety of educational situations he faces. These assumptions, from which to build programs of action, are relevant:

(9) The administrator should receive training in how to give and receive feedback. His behavioral repertoire will be used most effectively when he recognizes the responses of others accurately. Skills in goal defining and in feedback receiving are necessary for the effectiveness of behavioral science research findings. Also, as part of this process, it would be valuable to identify those restraining forces in the social situation that would limit the value of the new practice.

(10) The administrator should receive training in flexibility and open-mindedness (Harrison, 1966). Often behavioral science findings seem to or actually do contradict each other. The ability to keep many seemingly contradictory principles in mind at the same time is necessary for effectively using behavioral science research findings.

Taking action to bridge the knowledge to practice gap in education requires operationalizing at least some of these assumptions. In recent years, federal legislation permitted the establishment of research and development centers, regional educational laboratories, Title III dissemination centers, and Educational Research Information and Communication projects. All of these new organizations could have strong influence in making behavioral science knowledge useful in education. However, even with these additional social structures, increased knowledge utilization

in educational administration will not occur easily because of the interpersonal and psychological processes discussed above.

Unfortunately, work done on overcoming some of these barriers to knowledge utilization has not been very great. Much more effort has gone into improving business organizations and government bureaus through the utilization of behavioral science. It still appears to me to be easier to capture the interest of a businessman or government leader in the use of behavioral science than it is a public educator. One of the few institutional structures for building a technology for knowledge utilization which has appealed to businessmen, government employees, and educators alike is found in the National Training Laboratories, now retitled as the Institute for Applied Behavioral Science. The major method of learning emphasized is one in which participants are helped to diagnose and experiment with their own behavior and relationships in a specially designed environment. Behavioral science concepts and findings are tried out behaviorally by the participants. Participants become both experimenters and subjects in joint learning activities. Such a methodology seems well suited for facing the social psychological issues raised in this paper.

Since new practices in educational administration usually involve new patterns of human behavior, they cannot be passed along like a new physical product. The adoption of a new practice will not occur if it is incompatible with the values, attitudes, and behavioral skills of the educator. Since the administrator is also a member of, and accountable to, an intricate social organization, he must take these interpersonal relations and social pressures into account in initiating change. Learning to practice administration differently, then, is not a simple matter of absorbing the written or spoken transmission of knowledge. An effective learning process

will involve various psychological "levels" of the administrator and this is where the methods of persons associated with the National Training Laboratories are relevant. Let me outline the type of program design, using some of these methods, which might help in bridging the gap between research knowledge and administrative practice. This proposed design is meant to address especially assumptions five through ten listed above. More thought and work still need to go into establishing appropriate social arrangements for realizing assumptions one through four. Let us assume that a behavioral scientist who already is attractive to some educators organizes a few of the most significant research findings available in a given educational problem area. For example, findings on organizational dynamics and change or perhaps the latest research knowledge on collective bargaining might be organized. Research findings on leadership and group processes or maybe findings on minority group dynamics in relation to the school could be summarized. The particular knowledge area chosen would not matter; however, it would be important to choose material that could be delimited sufficiently and that would be meaningful to the administrator.

Those who train educational administrators in graduate school classrooms often are dissatisfied with their own methods of instruction. They have concepts and research findings in mind to teach in a selected content domain but feel frustrated about the low use of these ideas by the practicing administrator. The traditional teaching methods of the lecture, assigned readings, and the passive reception of new material are viewed as allowing for very little cognitive growth and attitude change, as producing dependency, and as not supporting the development of new behavioral skills. Other instructional approaches such as group discussions, introspective involvement, role-playing, and the analysis of one's own behavior

have been developed as alternatives. These methods appear to provide for more meaningful personal experiences because they engage the administrator attitudinally and behaviorally. Even these newer approaches, however, often fail to have much impact on the administrator's actual role performance. Though meaningful learning experiences may be provided by these training methods, what is learned often is not brought back to the school. The administrators sometimes cannot follow through on commitments made during training because of the many expectations and pressures that impinge on them in the school. This issue of the transfer of training is seldom systematically planned for and worked out during and after a training event.

The two designs described below represent attempts to consider the social psychological factors involved in keeping the administrators from using behavioral science knowledge. The two program designs might include the following sequences of activities:

Administrator Development Training:

The first design for a training program focuses on the individual administrator's development. Ten stages can be suggested as part of such a design.

(1) Some sort of interpersonal sensitivity training which would help the administrators to be more reflective about their own behavior could come early in the program. The major goal of this activity would be to help administrators to think about their own practices and to increase their readiness to accept new practices. A secondary goal would be to impress upon the administrators that their own behaviors, and not thoughts and values, affect the feelings and reactions of those who work with them. (Bradford, Benne, and Gibb, 1964).

(2) Behavioral science knowledge relating to some aspect of administrative practice would be presented. Discussions could occur on how this knowledge relates to the administrator's goals and role demands. Using the knowledge, or at least some part of it, would be established as an important objective for each administrator. Interpersonal sensitivity training would support the cognitive explorations of this phase.

(3) Diagnostic skills related to the domain of behavioral science would be discussed and the administrator would become better acquainted with how to measure the effects of his role behaviors related to that domain. For example, if leadership research findings are being presented, the administrator would learn how to measure the effects of his leadership behavior. Whenever appropriate, administrators in the program will be asked to give feedback to one another on these same behaviors. As the administrator becomes more aware of his own characteristics, he may make fewer errors in perceiving how others are thinking and feeling (Norman, 1953).

(4) Specific ways in which the new knowledge might be used in practice would be "brainstormed" and refined. Each administrator would be asked to think through the various ways he would behave in attempting to implement a given research finding. He might fantasize difficulties that he anticipates in using the new practice effectively.

(5) These practices would then be tried out through role-playing and immediate reactions could be given by the other administrators in the group. At this same time, several different observation schemes might be introduced and some administrators would be asked to serve as observers and to give structured feedback to the role-players.

(6) Skills in giving, receiving, and using feedback would be discussed and the role-playing vignettes might be repeated again in attempts to use the feedback.

(7) The administrators next would be asked to make commitments to try out some of these practices in the "real" school setting. Force field analysis could be used to explore the facilitating and restraining forces impinging on following through with the plan (Coch and French, 1948). Attempts would be made at reducing the strength of some of the restraining forces either through revisions of the practice or by helping the administrator to gain more confidence by simulating the practice still once more. One effective means for gaining commitment is to have the administrator record on a tape the thoughts he has about the practices he will try in his administrative role.

(8) A later session should be held, after the administrator has had an opportunity to get started on the new practice. The tape can be played back as a reminder of the specific details of the practice. If the original commitment was unrealistic, changes can be made at this point in how the practice will be tried.

(9) The administrator now collects some data about the effects of his practice. He might use questionnaires under certain circumstances, but most often collecting verbal or non-verbal feedback from others will be sufficient.

(10) During the time when the practices are being tried, group discussions with fellow administrators would be held perhaps once a week or once every two weeks to support each administrator's efforts and to revise plans further for utilizing the behavioral science knowledge. Attention will be given to how the practices need to be modified depending on the nature of the natural situations.

Organizational Development Training:

The second design involves an approach directly focused on having an impact on the social system of the school. It aims at modifying the expectations and pressures on the faculty so that innovation can occur more easily. Eight stages can be suggested as parts of this design.

(1) An organizational training event, involving the entire faculty, would come early in the program. Its purpose would be to help the faculty become more aware, open, analytic, and skillful about its interpersonal relationships, communication patterns, behavior norms, decision-making processes, and group problem-solving skills.

(2) Behavioral science knowledge relating to some aspect of school staff processes would be presented. Discusssion could occur on how this knowledge relates to the faculty's goals and role demands. Trying out some aspects of the knowledge would be established as an important objective for each administrator. The organizational training activities would support the cognitive explorations of this phase.

(3) Diagnostic skills related to the domain of behavioral science would be discussed and the staff would become better acquainted with how to measure the effects of their group processes related to that domain. For example, if decision-making is being discussed, the staff would learn how to measure their expectations about and procedures of decision-making. Also, the entire staff would collect data from itself on its decision-making processes.

(4) Specific changes in staff procedures would be "brainstormed" and refined next. The staff or representatives on the staff would be

asked to think through the various ways they might implement a given research finding. They might also fantasize about the difficulties that they would anticipate in using the new procedures effectively.

(5) The new procedures would be tried out by the staff on a trial basis. A panel of staff members could be asked to observe the new procedures in action and to give feedback to the entire staff about them.

(6) Skills in giving, receiving, and using feedback on the staff would be discussed and tried out as part of the feedback from the panel of observers.

(7) After a trial period, the staff would be asked to make commitments to continue the most effective new procedures. Force field analysis could be used to explore the facilitating and restraining forces impinging on following through with the plan. Attempts would be made at reducing the strength of some of the restraining forces either through revisions of the practice or by helping staff to understand the new procedures more thoroughly.

(8) A panel of staff members can continue to collect data about the effects of the new procedures and a later session might be held to evaluate the progress of the new procedures.

Summary

Considerable amounts of behavioral science research knowledge relevant to educational administration are now available, but little of this knowledge is transformed into effective practice. Some active attempts at making research knowledge available to administrators have been the professional research journals, the expert consultant, the successful experimental program diffused from another system, and the development of knowledge from within the school by small-scale action research programs

or by survey data feedback projects. Even with these attempts, the gulf between knowledge producers and knowledge users in education still is wide and all too seldom bridged.

Three problem areas in connecting knowledge to practice in educational administration can be described. The first problem point concerns the social relationship between the behavioral science researcher and the educational administrator. A condition resembling the in-group, out-group phenomenon found in studies of prejudice seems often to describe researcher-administrator relations. Stereotypes and antipathies are reinforced by the lack of two-way communication and hostility is increased by mutual challenges of each others' intelligence and status. Several vicious cycles of negative interpersonal relationships involving inadequacy and withdrawal as well as hostility and resistance can characterize the research-administrator relationship.

A cluster of four psychological processes accompany these difficulties in interpersonal relations. Both parties selectively perceive aspects of the others' behaviors to the detriment of the relationship. Moreover, distortions of memory, especially concerning the feelings of the other, and a tendency to place low value on each others' work characterize the relationship. Finally, the self-concepts of both the researcher and the administrator can be seriously threatened by the possibilities of collaboration.

If a relationship is formed between researchers and administrators that is effective and viable, we then must face the psychological issue of linking knowledge and practice within the administrator's personal framework. Skillful administrative action requires more than correct intent and practical research knowledge. The social skills of administration require considerable practice before they are spontaneously available for

use in natural situations. Internal psychological linkages between knowledge and practice is made more difficult for the administrator by role expectations others hold about him, by his own division between the "role of administrator" and the "role of student-learner," by the lack of clear and operational educational goals, by his lack of motivation to try something new, and by presentations of the research knowledge in strictly verbal ways in partially threatening surroundings.

The third problem point in connecting knowledge to practice concerns the administrator's making effective use of new practices by matching them up with appropriate situations. Utilization of research knowledge often breaks down when new behaviors are used indiscriminately in diverse situations. Ambiguities in goals as well as the role expectations of others again serve to inhibit the appropriate uses of new behaviors. Psychological processes such as the tendency to strive for subjective consistency, rigidity, and closed mindedness sometimes deter the flexible uses of new practices.

More time and energy need to go into building connections for transforming knowledge into practice in educational administration, especially in regard to these social psychological factors. Federal money is being used in R & D centers, Regional Laboratories, Dissemination Centers, and ERIC projects to facilitate the knowledge utilization process. The National Training Laboratories and related organizations are concerned with overcoming the interpersonal and psychological barriers to utilizing behavioral science in social practice. Social psychology, in general, may have a great deal to offer in bringing researchers and administrators together in worthwhile communication.

Trust, openness, and some attraction need to be established between researcher and administrator before utilization will succeed. Trust can be increased through participation in cooperative activities in which the intentions for entering into a relationship and mutual expectations are publicly discussed. Each must be open for feedback concerning violations of expectations. Both parties should be able to benefit from the project and, wherever possible, both should agree upon the superordinate goals they share. Public discussion of restraining forces for keeping each from collaborating with the other should help to increase openness and attraction in the relationship.

In building psychological linkages between knowledge and practice within the administrator, the administrator's values and goals should be more clearly and operationally defined. He should be encouraged to simulate his learnings through role-playing and then try out the new practice in the "real" setting, while still being able to discuss his try-out with other administrators. For many new practices, the entire staff of a school or school system should be involved because of the strength of normative patterns and interpersonal expectations. Further, for the accomplishment of matching behavior appropriately with each situation, the administrator should receive training in how to give and receive feedback, in how to diagnose social situations, and in flexibility and open-mindedness.

Aspects of training events for accomplishing better knowledge utilization should be based on these social psychological assumptions. An example of one such program would include interpersonal sensitivity training, presentation of some limited set of behavioral science research findings, diagnostic skills in measuring aspects of the behavioral science domain under discussion, thinking of new practices which spring from the

research knowledge, role-playing the new practices, receiving feedback from observers and trying the practice again, trying the practice in the real setting, having supportive group meetings with the administrators who are trying new things, and finally diagnosing and getting feedback from others in the natural situation on how the new practice is working out.

An example of a second training program would include organizational development training involving the entire faculty of a school. The program would include the presentation of some behavioral science research to the staff, diagnostic skills in collecting data about the issues from fellow staff members thinking of new procedures that arise from the research knowledge, trying-out the new procedures, and finally diagnosing and getting feedback from colleagues about how the new procedure is working out.

The need is great for a technology of transforming behavioral science knowledge into effective practice in educational administration. This paper has been addressed to only one aspect of that technology, the social-psychological. Perhaps it will stimulate others to think and act more deeply, thoroughly, and effectively about the issues involved.

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